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## AROUND THE LAKES.

CLEVELAND.

It is probable that the steamer Fairbank, Captain R. Neville, will go into winter quarters at Milwaukee.

Captain Alva Bradley, who was somewhat better on Sunday, suffered a reaction Tuesday, and at this writing is considered very ill.

The propeller Oscoda, whose machinery has been compounded by the Globe Iron Works, will take on the new machinery at the derrick to-night and convey it to Port Huron, where it will be put in.

At Globe drydock the steamer Colonial got a new forefoot and went out of dock to give place to the schooner Spencular for recalking. The Spencular will fill the drydock the balance of the week.

A libel has been filed in the admiralty court against the steambarge Samuel T. Hodge, belonging to Ward's line. The action is brought by John Cooper, a seaman, to recover $32, claimed to be due him as wages.

It is reported at this port that Messrs. Harvey Brown and E. M. Peck have made a contract with the Detroit Drydock Co. for the construction of a tow barge 220 feet over all as a consort to the propeller Smith Moore.

The schooner James Couch, which has been recalked around the stanchions, hatches and oakwork by the Globe drydock, will take a cargo of coal to Detroit and take on a cargo of wheat to hold through the winter on owners' account.

The Variety Iron Works will build a new boiler for the steamer Benton 9 feet in diameter and 14 feet long with six main flues, two 12 inches in diameter, two 16 inches and two 18 inches; there will be 129 return tubes 3½ inches, to be completed by the opening of navigation next season.

The steamer Kasota has taken on a full cargo of flour at Duluth and cleared on Tuesday for Buffalo, and the Hiawatha is on the way up with the Adams in tow. Captain Wilson's boats, always first-class and in good condition for all kinds of weather, can be relied on by shippers both early and late in the season.

M. G. Brown, a Cleveland lumber dealer, bid in the barge Colonel Brackett, sold by the United States marshal at this port Tuesday, for C. M. Zengerle, of Michigan. The price realized was $525. The Brackett is 186 tons burden, was built at Tonawanda by F. N. Jones, in 1869, and rebuilt in 1880, classed B1½ and rated for coarse freight only.

In the case of the state of Ohio vs Dwyer for keeping his saloon open on Sunday, Mr. Geo. Presley, shipbuilder, was summoned as a juror before Judge Hutchins, in the police court, but was excused. We can not tell why he was excused unless it be that shipbuilders are not permitted to serve as jurors in a police court, or that candidates for mayor on the prohibition ticket can not act as experts in a liquor case.

A libel has been filed in the United States district court by William Westbrook, Eugene Roy and Robert Wilkinson against the schooner Gerrett Smith for the sum of $184, claimed due them for wages as seamen. The schooner was seized by the United States marshal, but immediately released because of her owner, the Detroit Tug and Transit Company being in the hands of a receiver at Detroit, which fact was not known when the libel was filed.

The plans for a fire boat submitted to the board of fire commissioners Monday by Mr. Cowles, of Brooklyn, N. Y., have been made for both an iron and a wooden boat and the detail drawings are very complete. The cost of the boat is not to exceed $29,000 and the secretary has been instructed to invite bids forthwith. The plans are calculated to produce a boat capable of throwing eleven two inch streams equal to 3200 gallons of water per minute, or equivalent to eleven of the most powerful steamers in the city. The dimensions of the iron fire boat will be: Length over all, 78 feet; length over low water line 17 feet 6 inches; beam molded, 22 feet 2 inches; beam over plating 22 feet 2¼ inches; beam over all, 22 feet 11½ inches; deep load draught, extreme, 7 feet 7 inches; depth molded at frame 2, 10 feet; displacement on low water line, 186 tons. The dimensions for the wooden boat are as follows: Length over all, 79 feet; length on low water line 70 feet; beam molded, 22 feet, 2 inches; beam over all, 23 feet, 4¾ inches; deep load draught, extreme, 8 feet, 4 inches; depth molded at frame, 10 feet; displacement to low water line, 136 tons. Everything possible will be done to crowd forward the work of building the boat. If the iron boat is accepted her bow will be splendidly adapted to cut her way through the ice on the river, being encased in ¾ inch iron. Two swivel pipes will be fitted in front of the pilot house, throwing 3½ inch streams for use in case of fire on the bank of the river. The boat will be supplied with ladders and other fire apparatus and carry 2,500 feet of hose. It is said that the proposed apparatus can be used at fires within fifteen hundred feet of the river.

BUFFALO.

*Special to the Marine Record.*

Nov. 24—This week begins with the arrivals of the last fleet to load for up the lakes. Although not large it makes quite a stir, because of the anxiety to have quick dispatch and to save an extension of insurance on vessels and cargoes after the 30th. An advance of 10 cents per ton on coal to Chicago and Milwaukee, the rate being now $1.10, with some desire on the part of shippers to push forward a few more cargoes at that rate, raises the spirits of vesselmen that are here to take advantage of the rise; added to this, we are having mild weather for this season of the year, with the wind fresh up the lake, a God-send to vesselmen during the fall months, as we have usually from October 1 to the close prevailing winds from the westward, giving vessels a hard tug to get up to the head of the lake. But this fall we have quite little spells of easterly winds at short intervals.

This week will foot up quite an amount of grain received into elevators, and there is several vessels in port and to arrive that are chartered to hold at the pleasure of the shipper during the winter. The grain is mostly from Duluth. So far one cargo from Detroit is held under the same conditions.

Shipments by canal has fallen off greatly, especially through loads, and freights have ruled low.

The canal men are closing up a season that has been very unprofitable indeed, and during the winter it will be felt more than to-day. Many will go home without a dollar to help themselves with, and some in debt at that. All the advantages this State has given in remitting tolls, etc., etc., has not been felt, as many would suppose, by boatmen, the freight rates having been reduced to a figure that sweeps away the benefit of the reduction on tolls. It is true, as some say, that it gives more business. Well, if it does the remuneration is small in comparison, with nothing to show for it.

In walking around the docks daily one sees the evidence of a suspension in lake traffic, many propellers and sail vessels being stripped of their outfit preparatory to laying up for the winter. Schooner S. V. R. Watson, Emma L. Coyne, and Niagara are among the number already in winter quarters. Of the propellers that are being prepared are the Empire State, Badger State, Idaho, St. Louis, China, Niack, Winslow, which goes to Erie to winter, are the boats comprising a large portion of the Lake Superior Transit line. There are three others not yet arrived, but will be laid up as they come into port—Fountain City, Japan, and India. None of the Union line in the Chicago trade are yet laid up; none of the W. T. Co.'s boats are reported as laying up yet. The Anchor line boats bound up and to leave here this week will lay up at Chicago. Boats coming down will lay up here as they arrive. In the Lehigh Valley line the two boats that left here this week will lay up at Chicago, Fred Mercur and R. A. Packer; three boats coming down, Oceanica, H. E. Packer, and Clyde. It is not yet decided whether they will return again or not; most likely they will.

Steamship Tacoma is in the dry dock in Chicago, and will be for some days, getting a new rudder to replace the one lost in the gale on the 19th or 20th of October, in Lake Superior, together with a new iron shoe lost at the same time. Both were made here and shipped to Chicago.

In conversation with Mr. S. A. Murphy, of Detroit, on Saturday last, with reference to the condition of the wrecked steamer Quebec, which he has a contract to recover and deliver to whom it may concern. He says that it has been a very expensive job, and her condition to-day is hopeful. She now lies in 18 feet of water, with her upper deck above water. He hopes to be able to patch her up so that he can pump her out in a few days at the farthest, and that she is not seriously injured by raising her up by the chains as some think. One of his greatest troubles was her position, alongside of a ledge of rock, in raising her. There was so much of an unequal strain on his lifting chains as to cause them to break many times, notwithstanding they were 2¼ inches in diameter. It is beyond question the deepest diving that has ever been known on fresh water. At one time she was down to a depth of 138 feet, and she had to be lifted up and over a ledge of rock more than 50 feet from top to bottom before he could drag her into shallow water, where she now lies.

Our coal trade has for the past week shown more vitality over any week during the season, and the hearts of the shippers has been of a more liberal character; $1.10 has been paid in the past two days, and to-day $1.25 was asked with a prospect that that will be paid to-morrow for two or three loads yet to go. The charters for the week has been liberal, and we have had some light arrivals from Ohio ports. Steamers City of Cleveland and Progress; later, C. J. Kinshaw, spot tonnage; Iron Chief, Iron State, Alcona, and Alta; W. J. Averill, C. W. Curtiss and tow for Toledo or Detroit; W. H. Barnum, Hecla, Raleigh, and Lucerne from Cleveland, loaded for Milwaukee; Iron Chief and Iron State, Chicago; Alcona, Alta, Chicago; Calumet, Chicago. The demand for tonnage has been chiefly for Milwaukee. No charters this week for Lake Superior. The Hiawatha loaded early in the week for Duluth on contract.

Deputy Marshal Donahue Saturday tied up the schooner Mary Grover, of Port Colborne, on three libels; one for $554.50 on suit of John Campbell, Levi Schroeder, William Logan and Charles Stone for wages; another for Chesbrough, Detroit, for $30, and another for the Detroit Tug and Transit Company for $80.

The propellers Arizona and China, of the Lake Superior Transit line, will be at once go into winter quarters here. Captain Robert Smith has made fourteen round trips to Duluth with the Arizona, an excellent record for less than seven months work. No other boat has done so well this season on that route.

THE superintendent of public works has given orders that the canals will close on December 1 at midnight.

A careful survey was Monday made of the damages sustained by the canal boat Great Wardrobe. John Humble represented the owner of the steamer William Edwards, G. H. Notter the boat owner, and P. Riley the Continental insurance company, which holds the risk on the Wardrobe. The matter was not settled, however. The damage to the boat itself was placed at $1,400; and this, with the loss of property aboard, the cost of raising and docking her, etc., would make the total loss between $3,000 and $3,500. The Edwards paid $1,785 for the damage done to the two other boats caught in the same collision.

The Courier says: This being practically the last week of November, the end of the season is in sight. It now looks as if the boats yet to be sent up from here by the lines are the Tioga and Jewett of the Union, the Milwaukee, Arabia and Syracuse of the Western, the Clarion from Erie of the Anchor, and the Clyde and Oceanica of the Lehigh Valley. The others coming here will be laid up after discharging their cargoes.

Steambarge Otego was yesterday libeled for freight money on her lumber cargo at Tonawanda. WM.

BAY CITY.

*Special to the Marine Record.*

Frank Wheeler intends building a large excursion boat during the winter in which the machinery of the Laketon will be the motive power.

Captain William Bates, with the tug Record, left the river Sunday morning with three barges and schooner R. J. Gibbs for Toledo.

The past week has been a busy one in shipping, as it is estimated that no less than twenty million feet of lumber were got off during the week.

The excitement of the week was the arrival of the propellers Pacific and consorts, Potomac and Annie Vought, from Buffalo, who had been chartered in that city for lumber from Bay City, at a cut rate of $1.75 per thousand. After having been in the Lake Superior trade all summer the fact of this outside tow coming in here at the last trip and cutting the rate caused much indignation among vessel owners and dockwollopers. Telephone messages were received in this city, asking for dockwollopers to load them, but the union wollopers flatly refused. They then telephoned up town for men, but with the same success on account of the cut. The cut was entirely uncalled for, and will result in the lying up of a large number of barges. It is understood that the Pacific and tow were compelled to throw up their charter and another was "made up" at going rates.

The steambarge Oswegatchie and consorts James Prentice and Lizzie P. Betts left the river Friday for Buffalo. The Prentice and Betts get $2.12½ from up town while the Oswegatchie gets $4 on oak from here.

The steambarge Bell Cross and consorts, Little Jake, S. Clement, George Wand and Chicago Board of Trade came in the river Tuesday from Buffalo, all loaded with coal for Morely, Ewen & Co., of Saginaw, where they go into winter quarters.

The steamer Metropolis has arrived in the river from Alpena on her last trip of the season. This completes about seventeen years of service on the lakes. The boat, however, is still rating, and is good as ever for speed and seaworthiness. Captain John Robertson, commander of the Metropolis, is one of the oldest and best known captains on the lakes. SHAW.

SAND BEACH.

*Special to the Marine Record.*

Nov. 23.—A severe gale of wind from the N.E., accompanied with snow squalls, set in Saturday night and still continues. In the harbor for shelter are the steambarges Iron Age and consort, S. Chamberlain and consort, S. E. Sheldon and consort, Waldo A. Avery and consorts, Music and 4, Ogemaw and 3, Yosemite and consort, propellers Waverly and Scotia, schooners Smith, Post, Fame, steamers Mary Pringle, City of Montreal, John Martin, and J. H. Devereux,

## MARITIME LAW.

COLLISION—OVERTAKING VESSEL—CROSSING COURSES—VESSEL TO WINDWARD—LOOKOUT.

*U. S. Dist. Court, Southern District of New York.*

Brown, J.

The libel in this case was filed to recover the damages sustained by libellant's lighter Billow, through a collision with the sloop Commodore Jones, in the East river, off Gold street, Brooklyn, between 9 and 10 o'clock in the morning of October 22, 1883. The tide was strong flood, the wind directly ahead and both vessels were beating up the river and close hauled, until within a short time of the collision. The lighter had no boom to her sail and her peak was down and she could not keep close to the wind. The sloop was running from one to two points nearer the wind and sailing faster, also, had been gradually overtaking the lighter. When near the Brooklyn shore they both tacked at about the same time, the lighter off Gold street, and the sloop about one block below. Very near the middle of the river a tug was going up stream, with two schooners lashed on each side of her, the one on the outer starboard side being a three masted schooner about 200 feet long. The course of the sloop lay a little ahead of and crossing the bows of the schooner; but as she neared the schooner, it was found that she was unable to go ahead of her, upon the starboard and the sloop thereupon undertook to come about upon a short tact, for Brooklyn side. At the same time, or a little before, her captain hailed the captain of the lighter to go about, and to run down his jib for that purpose. The lighter not being handled quickly enough, to accomplish this, the sloop did not come about but remained in stays, running along parallel with the schooner, and only a few feet away from her, until the lighter's bows struck the sloop on the starboard side, just forward of her rigging, at nearly right angles, causing some damage to both. The bows of the sloop were knocked by the blow over against the schooner, striking her, as the claimant's testimony shows, by the fore chains, and doing her also some damage there.

From the foregoing statement it appears that the courses of the lighter and the sloop were crossing courses, and by an angle, as the testimony shows, of about 1½ points, and the sloop was also in the position of an overtaking vessel. The sloop, at the time she came about, or wished to come about, just before the collision, was a little distance ahead of the lighter to the westward, that is, ahead upon her own course; but the lighter was a little ahead to windward, and both were close hauled and upon the same tack. Literally rule 17 and rule 22 both include this case, but in contrary senses; by the former rule the lighter being to windward, would be bound to keep out of the way of the sloop to leeward; by the latter rule the sloop, as an overtaking vessel, would be bound to keep out of the way of the lighter. But by rule 23, where one was bound to keep out of the way, the other was bound to keep her course. All these rules, however, are subject to rule 24.

In the case of the Cayuga, (14 Wall. 270), where two steamers were sailing upon crossing courses at a difference of an angle of three points, the slower steamer being ahead had the other upon her starboard hand, and by rule 19 was therefore required to keep out of the way of the other; while the latter under rule 22, as an overtaking vessel, was the one that was bound to keep out of the way. The Court held the former rule to prevail, and says, (p. 275) "Every vessel overtaking another vessel, it is said, shall keep out of the way of the vessel ahead; but that rule can not properly be applied in this case, as the two steamers were crossing, or running on intersecting lines, in which case the question is not in general affected by the comparative speed of the two vessels, nor by the fact that the one or the other was slightly ahead when the necessity for precaution commenced. Undoubtedly, where two ships are running in the same direction, the ship astern, if she is sailing faster than the ship ahead, is in general bound to adopt the necessary precautions to avoid a collision; but it is clear that the rule does not in general apply in a case where the ships are crossing, or are distant from each other on a right line, and are running on intersecting lines."

It is important to notice, however, that the Court finds "That at the time when necessity for precaution commenced the two steamers were nearly abreast." Page 277.

There are three cases in which a similar conflict arises between rule 22 and rule 19 n regard to sailing vessels. Thus if A is coming up astern and on the starboard quarter of B, both having the wind on their port side, and the course of a is crossing that of B ahead of her at an angle say of one or two points these crossing courses involve the risk of collision, and A is also overtaking B. By rule 22, A as an overtaking vessel must avoid B and the latter keep her course. But rule 17 says, "If they have the wind on the same side, * * the vessel which is to windward shall keep out of the way of the vessel which is to leeward. In this situation both vessels may (1) have the wind two or three points free or (2) both may be close-hauled or (3) B may have the wind free and A be close-hauled. Rule 17 makes no distinction in these cases. In all three B would be the windward vessel and under rule 17 would be bound to keep out of the way; while A is equally an overtaking vessel, and if rule 22 applied, A must keep out of the way of B. The last situation arose in the case of the Clement (1 Sprague, 258), where it was held that the slower vessel to windward, having the wind two or three points free, was bound to keep out of the way of the overtaking vessel close-hauled. But Sprague, J., says specifically that if both were close-hauled, the overtaking vessel would have been bound to give way. This was affirmed in the Circuit by Curtis, J., (2 Curt. 363), and on appeal the Supreme Court were equally divided. 1 Pars. Ship. & Adm. 568, note 4). This was however before the statutory rules. In the case of Simpson against Spreckels, (13 Fed. Rep. 93), the vessels were drifting rather than sailing and had no steerage way; and in the Peter Ritter, (14 Fed. Rep. 173), the situation was peculiar in that the vessels ahead "could not luff," while the overtaking vessel had nothing to prevent her keeping off.

I have not found any other decisions in this country under the rules of navigation in the Revised Statutes as to which rule is to prevail in the cases stated. In the Peckforton Castle (3 Prob. Div. 11), the situation was similar to that of the Cayuga, and the vessels were treated as crossing and not overtaking. By article 20 of the new international rules, which were adopted by the United States March 3, 1885, chap. 354, an overtaking vessel is in all cases required to keep out of the way of the vessel overtaken, natwithstanding the prior articles. This provision has been recently held in the case of the Seaton (9 Prob. Div. 2), to remove the ambiguity on the former rules on this point. Articles 14 and 20 of the new rules are in accordance with the rules as laid down by Judge Sprague in the case of the Clement previous to the present statutory regulations. See the Governor, Abb. Adm. 109; the Rhode Island & Olcott 505, 515; Whitridge vs. Del., 23 H we 448, 452; the City of Merida, 24 Fed. Rep. 229. * * *

I do not find it necessary to pass upon the application of the existing rules 17 and 20 to this case. Rule 24 makes all the preceding rules give way to any special circumstances rendering a departure from the general rules necessary. The presence of the tug and tow in mid river some 200 feet long, prevented the sloop from going further on that tack was such a circumstance, it seems to me, as to control the obligations of both the sloop and the lighter. When the sloop began to come about the lighter, if any lookout or watch had been kept upon the sloop, might have come about at the same time, and avoided this collision. If the sloop had a right to tack at the time she did, clearly the lighter was in fault for not coming about at the same time. I do not credit the statement of the latter's witnesses that she had not sufficient steerage way, or sufficient room to come about. The fact that through tacking near the Brooklyn shore, and at the same time with the sloop she had got well out into the river, and was going at the rate of two or three knots, shows sufficient speed and means of coming about. She had no difficulty in tacking in shore, and there was no more difficulty out in the river. Her lookout, as the evidence shows, was otherwise employed, and not attending to the sloop; and the captain's view was so obscured by barrels, that he could not see properly what was going on.

The claimant's evidence shows further that the sloop, at the time she started to come about, was on a line with the bows of the schooner; but that while in stays, the tug drew ahead a little, so that at the time of the collision the sloop's bows were knocked against the schooners fore cabins. The pilot of the sloop, which was 80 feet long, would therefore be at that moment a little aft of 'midship of the schooner, or off her starboard quarter. As the tug and tow, moreover, were going up stream at about the same rate with the sloop, and having the sloop all the time nearly abreast, it is clear that the tug and schooners were all the time in the way of the sloop's running out of her course. The sloop found she could not pass them ahead; and I know of no rule which required her to drop 200 feet astern to pass to the westward rather than tack in the way she did. Practically the tow was in the situation of an obstacle to further navigation on that tack; and the sloop had, therefore, the same right to tack on meeting this obstacle to her course that she would have had if this obstacle had been either the western shore, or a shoal in mid river, instead of a tow. The lighter was bound to keep watch of the vessels to leeward, and to tack in time to keep out of the way of a necessary tack by the leeward vessel. The sloop had the right to rely on the lighter's observing this duty.

Had the sloop voluntarily come up under the quarter of the schooner instead of passing astern without much deviation from her own course, a different question would be presented. I am satisfied from the evidence on this trial that that was not the fact in this case; and that as her witnesses state she could not have gone astern of the tow, except by her falling off from her course some time previous, and going far out of her way. This was not required of her. But not being able to pass ahead of the tow she was practically in the situation of a vessel that had run out her tack, and had the right, therefore, to have the lighter, as the windward vessel, keep out of her way on tacking.

The captain's testimony is very inconsistent in some particulars. He says he starboarded to go astern of the tow some ten or twelve minutes before the collision; but says it was five or six fathoms from the schooners. The deckhand says it was when 600 to 800 feet off from her. If they turned when 600 or 800 feet distant, it must have been very soon after tacking, as the river is there only 1600 feet wide; and in that case the lighter had the wind free for a considerable space before reaching the sloop's course, and in that situation, beyond controversy, the lighter would be bound to keep out of the way of the sloop which was close-hauled. But I do not credit that estimate of the distance. The captain's testimony is wholly unreliable on that point, because so inconsistent. But it seems probable that he did starboard some little time before the collision, and then had the wind free, and hence was bound to keep out of the way of the sloop.

The primary fault that brought about the collision was, I think, in the lighter's not keeping a watch on the sloop. Had the latters course been observed, the captain of the lighter would not have committed the gross error of changing his course to port so as to cross with free wind the course of the sloop. That fact puts him in clear fault and the fact that he struck the sloop nearly, at right angles when close to the schooner and sent her bows in the latter's fore chains, is clear evidence to my mind of gross inattention and bad handling on the lighter's part. Upon the evidence before me, I think the sloop was not bound to go so far out of her way as to run astern of the tow; nor do I perceive any fault in the handling of the sloop.

The libel must therefore be dismissed.

October 30. 1885.

## A MERCHANT MARINE.

A merchant marine, said General Tremaine, in his exceedingly able address before the Church congress recently, is not sentiment but security. So, at least, our European brethren regard it. Austria has subsidized steamboat companies for a period of ten years, at the rate of $1,000,000 per annum; Hungary for the same period, at about $100,000. England pays, according to the importance of the postal service, something over $8,000,000 per annum. The average duration of the concessions of France are from fifteen to twenty-four years, the annual sum about $6,500,000. Spain's concessions last from six to eight years, and the amount paid is $1,000,000 annually. Belgium gives a guaranty of average return, which costs about $200,000 a year, which will not expire for thirteen years. Holland expends for this purpose $353,000, and will continue to do so for ten or fifteen years to come. The merchant marine of Italy costs the government about $2,000,000 annually, while Germany has recently taken up the matter vigorously and will not be left behind in the race. It is not likely that sentiment alone prompts these vast expenditures.—*Philadelphia Press.*

The seventeenth annual list of merchant vessels of the United States, as prepared by the commissioner of navigation, shows as follows, compared with the list of the previous fiscal year: Total number of vessels in 1884, 26,630; in 1885, 25,513; decrease, 1,117 vessels; sailing vessels in 1884, 17,595, in 1885, 17,167, decrease, 431; steam vessels in 1884, 6,111; in 1885, 5,705; decrease, 405; unrigged vessels in 1884, 2,921, in 1885, 2,640; decrease, 281. It is stated that the decrease in the number of vessels is more apparent than real, as evidenced by the fact that there were many vessels in the list of 1884 which had been lost, or sold to foreign traders. That they were retained on the list is due to a failure on the part of the owners or masters to report their loss or sale. It is estimated that the real decrease in the number of vessels owned in the United States during the past year was about 200.

## CHARACTERISTICS OF MISSISSIPPI RIVER STEAMBOAT MEN.

*Written for the Marine Record.*

BY THE SECOND ENGINEER.

PART I.

Steamboat men upon the Mississippi river, (by the Mississippi river I include the entire number of western and southern rivers), are a distinct class of individuals, with their own peculiar, though well defined characteristics, their whims and fancies, their humorous and their serious phases, and lastly their fears and their prejudices, as have the followers of any other profession. Yet steamboating upon the Mississippi is different in very nearly every detail from that carried on upon either the waters of the great lakes or the ocean. Mark Twain, in his several sketches of western river men, has given to them a reputation for being men of unstable minds, and of uncouth language. He makes them but one grade in advance of the frontiersman in point of intellect and character. Steamboating, in his eye, is a rude conception of commerce, and the followers a rude conception of humanity.

With a few exceptions the language, or rather the nomeclature of the Mississippi river steamboat man, is peculiar to the locality; in fact, many of their modes of expression and designation are so foreign to other styles of boating as to become at once provincial. A western river steamboat man never estimates the size of a boat by her tonnage, but by her boilers, nor does he estimate the power of a steamer by the term "horse power," but by the size and length of the engines, while her power to generate steam is only understood after it is explained that "she makes plenty of steam." Ask an engineer from the river regarding a certain boat's capacity, power, and steaming qualities, and he will answer by telling you how many boilers she has, the size of her engines, and whether she makes steam hard or easy. And the answer will be perfectly satisfactory, for the questioner will at once understand very nearly the tonnage of the boat. Although this is a fact, still there is no rule by which these estimates are made, other than custom.

The first boat I ever turned a throttle upon was of about 800 tons, net measurement, and her power consisted of three boilers, 26 feet long by 42 inch shell, with two engines of 20 inches diameter of cylinder, and 6 foot 6 inch stroke of piston. She was a side wheel steamer, 210 feet long and 30 feet beam, and she was a very fair average of a western steamboat, her draft of water being about 3 feet light. That being the case then, to tell of a boat with three boilers indicates a steamer of fron 700 to 900 tons burden.

Fuel is never estimated, as regards its consumption, by the tons or bushel, that is generally speaking, but by the sum paid out for it. Or in other words, when you estimate the fuel consumption you give expression as to the number of dollars worth per day consumed, nor is the question asked regarding the fluctuation in price.

A man never "sails in a boat," but he "runs on her;" nor is he ever "discharged," but is frequently "put ashore" or "run up the hill." No engineer will claim to be "chief engineer" of a steamer, but you often find where they "have charge of her." And seldom does the engineer "full stroke his engines," though he frequently "belches 'em." We never "take soundings," yet often "heave the lead." Although our steamers are high pressure yet we never carry big steam as estimated in pounds, but quite often you hear an engineer say he "carried her "stinking hot."

## NAUTICAL NOTES.

A formal survey of the schooner John Kelderhouse was begun at the Chicago dry-dock on Friday, and it was determined that the vessel's repairs would cost about $2,000, enough to make a good average claim against the insurance companies. The escape of the Kelderhouse from total destruction was a narrow one.

The tug John Owen, with the schooner Scotia in tow, while trying to pick up the schooner James Mowat, near Bar Point, brought the two schooners together with a crash. The stern of the Scotia was badly damaged and her yawl was cut in two. The Mowat was uninjured.

Lake shipments of iron ore from Marquette, Escanaba, St. Ignace, and L'Anse have practically stopped for the season of 1885. The grand total of shipments is 2,015,278, or a slight excess over the 2,000,000 output placed by good judges as the probable limit of production for this season. It is likely that 5,000 to 15,000 tons more will be sent out. This will be the smallest output since 1880, when the ore produced was 1,885,724 tons. Each ton is of 1,240 pounds. In 1881 the output was 2,295,518 tons. In 1883 the high water mark was reached, 2,947,392 being sent out from the mines of Menominee and Marquette ranges. All of the large mines have decreased shipments, and of the small ones many are entirely closed.

An improvement has been made in the Bessemer Steel Works, which, it is said, will have the effect of making Bessemer steel in equality to crucible steel, at about one-tenth of the price. The change consists in a thorough mixing of spiegee iron or maganees with moulton iron in the ladle so as to uniformly carbonize it. Besseiner steel can be produced at a cost of 1 and 1½ cents per pound, while that made in crucibles cost at least eleven cents.

### PROVIDENCE WINDLASSES.

Following new windlasses have been furnished by the American Ship Windlass Company, of Providence, Rhode Island:

The schooner building at New Haven, Conn., by Henry Sutton and others, with a "Providence" capstan windlass, with F. A. Grater's patent friction locking gear and other improvements. Ross & Sanford's dredge at Jersey City is to have a "Providence windlass to each quarter forward and aft, four in all for handling their anchors and chains. They will be run by steam donkey engine on board. They will have Grater's friction locking gear, and Emery & Cheney's patent rubber stoppers, The steamer building by Howard & Montgomery for the Old Colony Line is to be a mate to the City of Fall River, but fifteen feet longer. She will have a "Providence" steam capstan windlass forward, similar to the one on the City of Fall River, with Grater's friction locking gear and Emery & Cheney's patent rudder stopper.

The fishing smack building at Noank, Conn., for the United States Fish Commission, will have a "Providence" patent steam pump brake windlass to work either wire hawser or chain cable. It is to have two sets of Gypsey ends for quick and slow work, Grater's friction locking gear, and Emery & Cheney's patent rubber stoppers.

The steam yacht building by Samuel Pine, from plans by G. Hillman, is to have a "Providence" vertical yacht windlass of latest design, and Emery & Cheney's patent rubber stoppers.

The yacht Intrepid, Mr. Lloyd Phœnix, is to replace a Perley windlass with a "Providence" patent pump brake windlass, with Grater's patent friction locking gear, and iron side bitts and pawl bitts, ends, etc. One No. 7 "Providence" capstan windlass, with Grater's friction locking gear, iron side bitts, Gypsey ends, etc., complete with latest improvements, for the Windsor Foundry Company, of Windsor, Nova Scotia. This company are to build the "Providence" windlasses after this for Canada, under an arrangement with the American Ship Windlass Company, of Providence, R. I.


# THE CENTURY
## FOR 1885-6.

The remarkable interest in the War Papers and in the many timely articles and strong serial features published recently in The Century has given that magazine a regular circulation of

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THE WAR PAPERS
BY GENERAL GRANT AND OTHERS.

These will be continued (most of them illustrated) until the chief events of the civil war have been described by leading participants on both sides General Grant's papers include descriptions of the battles of Chattanooga and the Wilderness. General McClellan will write of Antietam, General D. C. Buell of Shiloh, Generals Pope, Longstreet, and others of the Second Bull Run, etc., etc. Naval combats, including the fight between the Kearsage and the Alabama, by officers of both ships, will be described.

The "Recollections of a Private" and special war papers of an anecdotal or humorous character will be a feature of the year.

SERIAL STORIES BY
W. D. HOWELLS. MARY HALLOCK FOOTE, AND GEORGE W. CABLE.

Mr. Howell's serial will be in lighter vein than "The Rise of Silas Lapham." Mrs. Foote's is a story of mining life, and Mr. Cable's a novelette of the Acadians of Louisiana. Mr. Cable will also contribute a series of papers on Slave songs and dances, including negro serpent worship, etc.

SPECIAL FEATURES

Include "A Trycicle Pilgrimage to Rome." illustrated by Pennell; Historical Papers by Edward Eggleston, and others; Papers on Persia, by S. G. W. Benjamin, lately U. S. minister, with numerous illustrations; Astronomical Articles, practical and popular, on "Sidereal Astronomy;" Papers on Christian Unity by representatives of various religious denominations; Papers on Manual Education, by various experts, etc., etc.

SHORT STORIES

By Frank R. Stockton, Mrs. Helen Jackson (H. H.), Mrs. Mary Hallock Foote, Joel Chandler Harris, H. H. Boyesen, T. A. Janvier, Julian Hawthorne, Richard M. Johnson, and others; and poems by leading poets. The Departments, "Open Letters," "Bric a Brac," etc., will be fully sustained.

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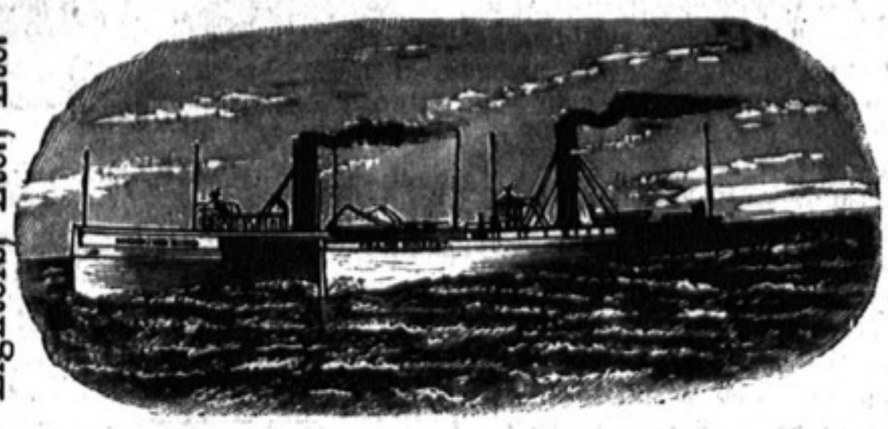

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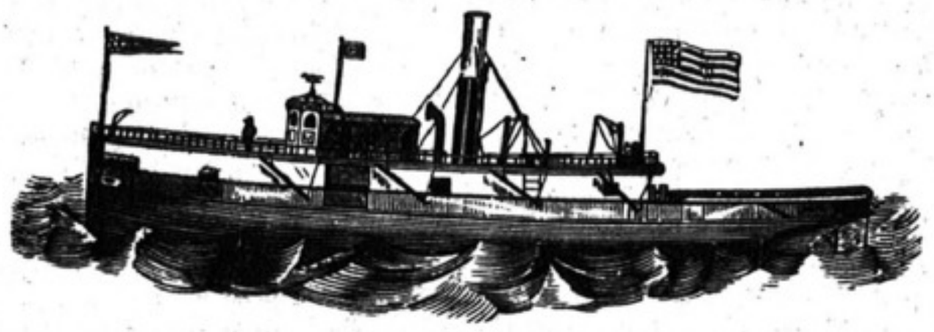

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### OFFICIAL NUMBERS AND SIGNAL LETTERS.

TREASURY DEPARTMENT, BUREAU OF NAVIGATION, WASHINGTON, Nov. 17, 1885.

*To the Editor of the Marine Record:*

Following is a list of merchant vessels of the United States to which official numbers and signal letters were assigned by the Bureau of Navigation, Treasury Department, during the week ended Nov. 14, 1885:

| Official Number. | Signal Letters. | Rig. | Name of Vessel. | Tonnage. Gross. | Net. | Home Port. |
|---|---|---|---|---|---|---|
| | | | SAIL VESSELS. | | | |
| 100,390 | K D G J | Bkne. | Isaac Dodge, | 541 93 | 514.23 | Damariseotta, Me. |
| 140,805 | K D G L | Sc. | Louise Hastings, | 123.22 | 117.06 | Bangor, Me. |
| | | | STEAM VESSELS. | | | |
| 106.388 | ..... | St. s. | Ariosa, | 140 47 | 70 24 | New York, N. Y. |
| 157.167 | ..... | St. y | Don Carlos, | 3 94 | 1 99 | Camden, N J. |
| 110,687 | ..... | St. s. | R. H. Williams, Jr., | 51.90 | 25.95 | New York, N Y. |
| 110,688 | ..... | St. s | Rescue, | 37.70 | 18 85 | Plattsburg, N Y. |
| 116,070 | ..... | St. s. | Sarah A. Jenks, | 350.48 | 219.06 | New York, N. Y. |
| | | | UNRIGG'D VESSELS. | | | |
| 57,883 | ..... | C. bt. | Silver Glo's | 128.47 | 122.05 | Buffalo, N. Y. |

JARVIS PATTEN, Commissioner of Navigation.

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|---|---|---|
| Buffalo Accommodation | °10 40 A M | °10 45 A M |
| Chicag Accommodation | °9 02 P M | ..... |
| Local Freight | °1 45 A M | °12 15 P M |
| WESTWARD. | Arrive. | Depart. |
| Chicago Accommodation | ..... | °6 45 A M |
| Fostoria Accommodation | °4 46 P M | °4 51 P M |
| Local Freight | °12 20 P M | °12 50 P M |

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| Eastward. | Arrive | Depart. |
|---|---|---|
| No 4, Fast Limited Express | °2 55 A M | °3 05 A M |
| No 8, N Y, B & A Express | °8 20 A M | °8 45 A M |
| No 26, Elyria Accommodation | †7 45 A M | ..... |
| No 35, Buffalo Ac'm via Sandusky | †10 30 A M | †10 50 A M |
| No 35, Toledo Accom via Norwalk | †10 30 A M | †10 50 A M |
| No 12, N Y & B Fast Express | °2 20 P M | °2 45 P M |
| No 2, Night Ex via Norwalk | 9 40 P M | †10 00 P M |
| No 22, Night Ex via Sandusky | †9 40 P M | ..... |
| No 26, Conneaut Accommodation | †4 25 P M | ..... |
| Westward. | Arrive. | Depart. |
| No 1, Fast Limited Express | °12 15 A M | °12 25 A M |
| No 23, Mich Express via Sandusky | °2 15 A M | |
| No 3, Chicago Express via " " | ‡6 05 A M | 6 30 A M |
| No 25, Mich Accom Norwalk | ..... | †6 30 A M |
| No 21, Toledo Ex via Norwalk | †12 50 P M | †3 30 P M |
| No 5, St Louis Ex via Sandusky | °10 30 A M | °10 40 A M |
| No 9, Chi Pac Ex via Norwalk | 6 15 P M | °6 40 P M |
| No 31, Elyria ac to Elyria only | ..... | †4 30 P M |
| No 27, Conneaut Accommodation | †8 10 A M | ..... |

Sunday train for Nottingham—Depart 8:15 a. m, and 1:45 p. m.; returning, leave Nottingham at 8:50 a. m, and 3:45 p. m.

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CLEVELAND, OHIO, THURSDAY, NOVEMBER 26


## *SALVAGE.*

In another column will be found an article from the Liverpool Journal of Commerce, which holds that as a general rule salvage service does not receive the reward it is entitled to, when the dangers attending the venture and the value of the property are fully considered, and shows, by the citation of several cases, that often the danger done to the vessel which attempts the service more than equals the value of the property saved. The article referred to also notes the fact that some steamship companies have charged the masters of their vessels not to attempt to salve property. This order has doubtless been prompted by the unwillingness of an admiralty court to grant full measure of reward to the salver, who, without any particular relation to a vessel in distress, proffers useful service, and gives it as a voluntary venture, without any pre-existing covenant connecting him with the duty of preserving the vessel in distress. When it is considered that a salvor can not force himself upon a vessel in distress against the will of the master of such vessel, as a salvor, as it is optional to accept or reject the service, the court should not hesitate to declare reward, in due proportion to the service rendered or property salved when extreme peril threatens. A steam tug or freight boat is not bound to take a distressed vessel in tow at extraordinary risk to herself and crew, and if she does, it is a salvage service and not mere towage, and should receive merit as such. The amount of danger to the crew or of straining the boat is important as a reasonable test of the probable contract and reward involved. Extraordinary towage is that which demands extra labor and danger. Towage may be a salvage service when performed in aid of a vessel in distress or extreme peril, and at the request or consent of the master of such vessel. The fact that a vessel is aground or disabled in machinery and without other resource is sufficient to show that she is in need of salvage service, and if such aid is proffered and accepted it entitles the salvers to reward as such, and the salvers are under an implied obligation to use good faith, honesty and skill in the undertaking, to land the property at the nearest port of safety, and see that it is cared for, but due regard must be paid by salvers to the convenience of the owners in determining to what port a vessel should be taken. The salvor should not retain possession of the property to the detriment of the owner, master or crew.

A case in point is that of the Pacific Steamship Company v. the steamer Queen of the Pacific, valued as $550,000, with a cargo worth not less than $200,000, bound from San Francisco to Portland. The steamer grounded on Clatsop Spit, at the mouth of the Columbia river, during a dense fog, and was pulled off by steam tugs under the direction and management of the above named company, after jettisoning about one-fourth in value of the cargo. Salvage was applied for and resisted, but allowed by Judge Deady, in the following syllabus: "A ship and cargo were saved from a common peril after a considerable jettison of the latter, and the ship allowed by the salvors to proceed to the destination, where the saved cargo was delivered by the master or agent to the consignees without contribution for salvage or jettison, but on the deposit by each consignee of a sum of money equal to 20 per cent. of the value of the cargo delivered to him to cover general average, and the execution of a bond for the payment of his proportion of the losses and expenses consequent upon such perils. It was held by Judge Deady (1) that the salvage service being for the benefit of both ship and cargo the expense thereof constituted a general average; and (2) that in a suit against the ship and cargo for salvage the libellants might elect to treat such deposit so far as a substitute for the cargo delivered, and require the agent for the vessel, under admiralty rule 38, to bring the same into court to answer the exigency of such suit."

The growing indisposition of masters of vessels to assist vessels in distress has been a subject of much adverse criticism, which, however, can not be to the detriment of such masters, when the action of the admiralty judges to refuse to allow proper salvage award is considered, and for the attending dangers. We have been informed that salvage award is a price paid for service rendered, the award being proportionate to the risk run by the salvors. But it has been conclusively argued that the salving ship, after salvage has been allowed, can not come against the saved successfully for bills for damage, demurrage or loss. That the ship has proffered the service for better or worse, and if sunk while engaged in the act of humanity, the loss, less the salvage award, must be borne by the owners. All admiralty judges, in computing the elements entering into a salvage award, deduct the insurance lost to the vessel saved, which lessens the value very materially of the claim of the salvors. Another factor entering broadly into the causes which prompt masters of vessels to decline to assist others in distress is a recent ruling that admiralty judges may refuse to receive or entertain testimony relative to the damage sustained by the salvor while towing a distressed vessel to a port of safety, on the ground that the danger of injury to the property was so large as to make it wrong in the equities of the case to place the whole consequences of the injury on the owner of the property saved, was one of the risks, by no means the only risk, which is run by salvors: but the judge is bound to consider, not only the circumstances of the loss having been incurred by the salvor, but in conjunction with it, all the other circumstances which enter into the problem of what, in a particular case, is a reasonable and, as between the parties, an equitable amount of salvage award. Thus the amount of justice pertaining to this, as to all other maritime questions, rests with the admiralty judge, under statute ruling, as to the manner in which he shall arrive at his conclusions.

## *INSURANCE AGAINST FIRE.*

In view of the small profit earned by tugs and the outlook regarding their future usefulness for towing, coupled with the numerous fires on tugs and their total destruction, not only by fire but by explosion, some injudicious agents of fire companies have made the remark that "Owners are selling them their tugs." This charge also extends to the smaller class of steambarges, and it is said that it is the intention of the insurance companies to cancel the fire policies on both classes of craft. While it is true that in general owners of from three to four vessels engaged in the lake trade have acquired means, by the adoption of the consort system, to do their own towing, thus rendering the occupation of the steam craft without tonnage capacity for carrying of nominal value, the suspicions of the crime of arson entertained by insurance men are not only reprehensible, if given voice, but unjust and without the warrant of circumstantial evidence or truth to sustain them. Further than this, they direct attention especially to those owners who have been so unfortunate as to lose their tug property by fire during the present season.

It cannot be denied that tugs, the heating facilities of which are confined in small space, are more liable to fire than any other class of lake boats, therefore the true business policy of the owners of tugs is to have them well insured against fire. Especially is this true of tugs constructed of wood. When underwriters place risks on tugs they do so with these facts in view and charge premium accordingly. They are careful to formulate a special schedule for this class of extra hazardous risks and consider that the interest from an extensive business will indemnify them against loss in case they are obliged to pay a limited number of their policies. In order to guard themselves against ruinous losses, underwriters have fixed a standard of fire appliances on tugs, and we can not see that any more equitable plan could be adopted, not that it works to give the insured any benefit of reduced rates, but that it serves to assist in the protection of the property of the insured and diminishes the risk of the insurers. The insurer, taking all these points and more, into consideration, guarding his company in every way against loss, indemnifying himself by premium which is considered to represent value for the risk he is carrying, has no apology for making comments that tend to cast suspicion upon the men with whom he is doing business, which comments, in certain contingencies, become direct charges of crime against an individual in case his tug is destroyed by fire. We say the insurer has no warrant to throw this black mantle of suspicion over the tug owner if he is so unfortunate as to lose his property by fire, and therefore urge upon him the wisdom of being somewhat more guarded in the speech he gives utterance to, the manner in which he betrays his suspicion.

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It is interesting to note the unanimity of the trunk line managers in the belief that past experience has fully established the fact that the joint action of competing railroad companies in establishing and adhering to uniform rates of transportation for like services to the public is necessary in order to avoid the evils of unjust discrimination and fluctuating rates, so injurious to commercial as well as to railroad interests. They advance their tariff on freight and publish the compact all agreeing to "strictly maintain it." This is a chronic disease and usually sets in about the middle of November. They hope to make during the winter months that of which they have deprived themselves by competing with the gentle ripple at the bow of the lake carrier during the summer months.

---

A move will be made early in the next session of congress by the friends of the Hennepin canal project to change the name of the committee on rivers to read "Rivers, harbors and canals," or "committee on waterways." The change will be made on the ground that the committee under the old name had no jurisdiction over canals, and as the friends of Hennepin desire to have the appropriation for the canal tacked on the river and harbor appropriation bill, the fight will be made on the change of name of the committee, which, if successful and the bill passed, the success of the Hennepin scheme is assured. It is said that the project has more friends in congress this session than it had last spring.

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It is believed that the loss of the Algoma rests with the managers of the Canadian Pacific railroad in their efforts to make time. An official of the line is credited with the statement that Captain Moore is held blameless and merits the confidence of all as a careful and discreet master by the managers, which view we are in accord with, as it has transpired that he did not attempt to make Rock Harbor when the boat struck and went down, but that he had just headed her into the lake.

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We regret to see a paragraph clipped from our history of lake navigation relative to the loss of the steamer G. P. Griffith, Captain Roby, and 186 lives, a disaster which occurred in 1850, going through the dalles as a calamity of recent occurrence, the papers putting it at 3 a. m. of Monday, the 9th inst.

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## TOWAGE RISKS AND COLLISIONS.

The Liverpool Journal of Commerce, in commenting on this subject, says: The recent decision in the court of admiralty, in *re* the owners of the steamer City of Hamburg against the owners of the steamer Cheerful, tempts us to refer once more to the dangers arising from towage. The Cheerful was in distress in consequence of damage to her propeller, and the City of Hamburg, in attempting to take her in tow, collided, and both ships were damaged. The City of Hamburg took the Cheerful in tow, but the former having to abandon the latter, the question for decision was, did the salving vessel place the ship in distress in a position of safety? If the Cheerful was saved by the services of the City of Hamburg, it would be a case of salvage. The court considered that when the Cheerful was brought to anchor off the shambles she was left in a position of greater peril than that in which she originally stood. As to the counter claim by the owners of the Cheerful, the trinity masters were inclined to think that greater care and skill might have been used on board the City of Hamburg to have avoided the collision; but they thought that, considering the danger in which the Cheerful was placed, the circumstances of weather, wind, and sea, there was no negligence on the part of those on board that vessel. In the result both the claim and the counter claim were dismissed, no costs being allowed on either side; judgment accordingly. This is one out of many collision cases where the salving vessel has collided with the ship to be towed. One mishap of this kind happened off the Dutch coast. A steamer neared another to render aid, and the salving ship ran into and sank the other. Here is another specimen of these salving risks. On the 11th of March, 1874, the ship Aracan, of Liverpool, was close hauled on the starboard tack, and making about five knots, when the masthead of a steamship was seen a few miles off, and subsequently two red lights were made out. Those lights were shown from the steamer American, which had the steamer Syria in tow. Both these vessels belonged to the Union Steamship Company. The Syria was disabled, and the master of the American deemed it his duty to get her into port. The master of the Aracan, from the great length of the towing cables, did not observe that one vessel was in tow of the other, and he therefore expected they would give way to his sailing ship. The Aracan struck the port side of the American with her stem. This caused the Aracan to slew round and to be placed in contact with the Syria, which was in tow. The Aracan foundered with her cargo, and the master and crew lost their effects. In an action for damages the judge of the admiralty court held the American alone to blame, but on reconsideration he ruled that the legal effect would be to make the Syria also liable, on the principal and servant.

The judicial committee of the privy council, July 24, 1874, held that where a master of a steamship, finding another steamer belonging to the same owners with her engines disabled, undertakes, not in pursuance of any specific contract made with the master of the disabled ship, but out of his sense of duty to his employers, and in the hope of obtaining salvage reward, to tow the ship home, the towing ship is not under the control of the tow, nor is the governing power in the tow, so as to render the two responsible for the negligent acts of the tug. This distinction seems far-fetched. Crews of ships, performing salvage service, can enforce claims irrespective of ownership. Then why draw such a fine line between the towing and the towed vessel?

The admiralty court, in March, 1857, ruled that a vessel in charge of a steamer is liable for the steamer's acts as well as its own. (The Melampis v. the Ticonderoga.)

In several suits it has been held that the propelling power is in the tug, but the governing power is in the ship towed. (*Vide* the Cleadon, judicial committee of the privy council, Dec. 20, 1860.) But this opens up such a large question for discussion that we must come back to our immediate subject. The steamer Thetis fell in with the steamship Sardis with engines out of order. The master of the Thetis agreed to tow the Sardis into port for a fixed sum. In attempting to take the Sardis into tow the two ships collided. The Sardis sank from injuries received, and the ship and cargo became a total loss. The owners of the Thetis were pronounced liable. (Admiralty court, July 1, 1869.) We will cite one more running down mishap to more forcibly illustrate the risks likely to be encountered in sailing operations. The steamship Ben Cruacham was fallen in with by the Merthyr with machinery broken down. The master of the Merthyr was asked to take the Ben Cruacham in tow, and consented. Difficulties were afterward encountered, and the Merthyr, by getting too near the Ben Cruacham to send on board a hawser to replace one which had snapped asunder, fouled the disabled vessel, knocked a hole in her side, and caused her to disappear beneath the sea. The crew of the Ben Cruacham were rescued and landed at Falmouth.

We will not make any further comments on this last mentioned case, beyond stating that the salving ship was unfortunate. We heard of a towing contract which told strongly against the amount settled between the two masters at sea. The sum appeared large to the master; but no stipulation was made as to loss or damage in any respect. Hawsers were rendered worthless, and the towing steamer was so much strained by the work she was incompetent to execute that the cost of repairs doubled the amount recovered for towage. A screw boat was nearly lost through the hawser carrying away her wheel. In a former article last year we discanted on the inadequacy of awards generally for salvage service, and we have directed attention to the unequal distribution as apportioned by the court of admiralty in London. Compared with the risks to ships and salvors we think a reform is needed. We could name companies and private owners of ships whose masters are instructed not to salve property. Heavily laden merchant steamers are not fit to tow; but when their masters undertake this hazardous task, the owners ought to be handsomely remunerated.

### DETROIT.

*Special to the Marine Record.*

Nov.24—Steambarge Passaic and consorts, all of which are owned at Detroit, went into winter quarters some days since at Buffalo. Meeting the captain the other day Your correspondent asked why he did not return the boats to the home ports, and in the ensuing spring bestow their patronage in the way of necessary repairs among Detroit shipyards. In response to my inquiries the captain's statement was that "mooring quarters was far less at Buffalo than at Detroit. This, of course settled the matter, and I came away with that much not previously enlightened upon. Why such a state of things should exist I am at a loss to determine, and as it concerns vessel owners themselves it is for them to solve.

The wrecking business, which in past years has been so prolific to tug interests, the present fall has not been much of a crop save in two or three instances. Keeping in idleness innumerable steam pumps and other pharaphernalia in that line, while it is doubtful if the interest on the capital thus invested is realized to an extent sufficient to satisfy the parties concerned. Many are engaged in the business, and as nearly all of them have tugs on hand they must have them thus equipped, or a tug would not be a tug in the strict meaning of that term. There are probably in Detroit at a rough estimate not less than 75 steam pumps owned by tug men, and only two instances I believe where owned by a private individual, and woe be it to that individual who has not the tug also, for as on the other hand a, pump (I mean a steam pump) is not that article without a tug.

Notwithstanding that lake business is so near its close steamers employed on shore routes, and as far west as Mackinac are doing a good business, while the passenger traffic is reasonably fair.

The tug Hercules, of Mills' line, which was so severely damaged here a few days since by the steambarge Schoolcraft, as noted in my last letter, is out again in good shape and attending to harbor tug business. As a duplicate to that misfortune it was reported that the Schoolcraft a day or two afterwards arrived at Alpena in a disabled condition, caused by the loss of her shoe and other damage. The report, however, did not hold water.

Captain Harbottle, marine inspector for the Canadian Government, arrived at Windsor on Thursday to examine into the condition of the railroad steamers at that point, and soon after left for Owen Sound.

Mr. John Craig, the well-known shipbuilder at Trenton, has in hand a contract to build, the ensuing winter, a barge for D. Whitney, of this city. The dimensions or other particulars have not thus far come to hand.

A statement given to a morning paper by a captain of a vessel which arrived here a day or two since with coal from Oswego, is not very encouraging to those engaged in the coal trade on long stretches. In figuring up the expenses of the voyage the following showing is presented, and reasonably truthful: Welland canal tolls, $216.95; towing through the canal, $105.84; towing from the canal to Detroit, $180; wages and supplies for vessel, $150; insurance, $48. Total outgoes, $700.79. Contra—Received freight on cargo, $540; loss on the voyage, $160.79.

Captain Blanchard's fleet of steamers and vessels are going into winter quarters at Trenton. The steamer Dickinson, of that line, will be taken out on Craig's marine railway for overhauling.

Regarding the situation of the Detroit Tug and Transit Company there is but little to be learned pro or con, more than it is thought that the tugs will be sold and the concern wound up; at least such seems to be the aspect of affairs which have appeared in the papers thus far. The extent of the libels filed thus far are a little beyond $35,000, and if the creditors do not get too ferocious over of claims the Murphys, you can rely upon it, have an abundance to more than meet all demands, and twice over, and as has been shown in the past being men of nerve and energy they will do so were the opportunity afforded them. If the tugs belonging to the above company are brought to a forced sale sacrifices will follow to the detriment of the cormorants who have commenced this slaughter.

The propeller Saginaw Valley, Captain Roach, it is stated, will wind up the remainder of the season on the route between Milwaukee and Ludington until January 1, under charter of the Flint & Pere Marquette Railroad.

There are good reasons for hoping that the season will close without the heavy storms which, in years gone by, were so prevalent, and were a terror to the bravest of our lake men. At an early period of lake history they were of annual occurrence, and during subsequent years more widely apart, the latest of which, so far as recollection goes, was in the fall of 1880, during which the ill-fated steamer Alpena and her masses of human beings were engulfed in the dark waters of Lake Michigan.

Several of Merick & Esseltyn's fleet have gone into winter quarters at Trenton, making quite an array of craft at that point, which affords good winter protection, as also does Gibraltar near by.

The Detroit Dry Dock Company has contracted with the Inter-Ocean Navigation Company for a new steamer 220 feet over all, 32 feet beam, and 22 feet depth of hold, propelling power of which will be a fore and aft compound engine 28 and 48 by 50 inch stroke. She is to be built of wood and calculated to carry 1,500 tons of ore.

Another fight took place on Sunday night between union and non-union sailors, which became for the time being unusually warm. As it was a free for-all the captain took a hand in it and with a handspike drove the union men ashore; all of which occurred on board the schooner E. G. Fort, while lying at an elevator.

The weather has become much colder, with indications of snow near at hand.

HALL.

### MILWAUKEE.

The insurance on the propeller Wisconsin expired November 11, and the companies refuse to renew it, not caring to assume any further risks after their losses on the iron boats crushed by the ice last winter. The local agent says that other companis are taking insurance, and as soon as all has been placed the boat will go into commission again. The propeller Roanoke is expected to go on the Grand Haven route on Wednesday.

The propeller Wisconsin is still lying here. It was reported that the company had secured but $30,000 of the desired $75,000 insurance, and that a private individual here had taken a risk of $5,000 at 13 per cent.

The Milwaukee Shipyard Company today laid the keel for a new steambarge of 850 tons capacity, to be built for a company of Milwaukee vessel owners.

A stock company has been formed here to build an 800,000 bushel marine elevator at this port.

### DULUTH.

The Lake Superior News says the new mill to be built by the Duluth & Iron Range people at Tower will be a much larger and more complete affair than the old one, and will have an estimated capacity of 100,000 feet per day. The old mill was used simply to supply a local demand, but lumber from the new one will be shipped to Duluth and the East via Two Harbors. The mill is to be built this winter and will be ready to saw next spring. A considerable amount of logs will be cut near Tower and on the shores of Vermillion lake this winter.

This week has been the largest in the history of Duluth in the matter of flour shipments, some 85,500 barrels having gone forward. This is equivalent to about 350,000 bushels of wheat.

The Herald says: In keeping with the size of the new warehouses to be built here will be the new coal docks that may be seen extending from the entrance of the new slip to near that of the present public one. The cars that come laden with flour will be at hand to take on board coal, ensuring ample facilities for the conveyance of fuel all over the Northwest. In no port on this lake, near or far from Duluth, will such a combination of facilities be possible, which insures that Duluth will be able to cultivate extensively the flour and coal traffic and will be prepared to compete, under the most favorable conditions, should competition arise from the projected Minneapolis Sault Ste. Marie and Atlantic railway or another quarter.

### CLAYTON.

*Special to the Marine Record.*

The steamer Flight, built by the Chaffey Bros., at Portsmouth, about twelve years ago, and at one time on the ferry between Brockville and Morristown, arrived at Brockville Sunday night and is now lying in Tunnel bay. She ran for some years between Picton and Napanee and subsequently went to Toronto, where she has been employed for several seasons past on the harbor works. She is now owned by Brockville parties, who contemplate putting her on the route between that place and Alexandria Bay next summer. She is a comfortable and exceedingly fast boat.

Twenty-four schooners, barges and tugs passed Clayton Wednesday. Evidently the business on the river has not closed yet.

### CHICAGO.

*Special to the Marine Record.*

The steambarge Robert Holland, Captain O. H. Olson, went into winter quarters last Saturday. She made seventy-nine trips between Muskegon and South Chicago during the season, starting out on the 13th of May and laying up on the 18th of November. A new boiler will be put in her this winter 9x16 of Otis steel of ⅝ thickness.

The F. L. Danforth, Captain John Isbister, arrived Tuesday evening, having made an excellent trip. She left this port with flaxseed for Buffalo on the evening of the 7th, arriving at that port on the 12th. She loaded 1,300 tons of coal and left Buffalo on the 17th.

J. H. Randall is building a steamyacht 32 feet over all, 8 feet beam, 3 feet deep. She is a very handsome model and is for sale.

Thomas Canevin is building a steamyacht for Captain William Brown 75 feet over all, 15 feet beam, 6 feet hold. She will have the machinery which was formerly in the United States tug Humphrey, which Captain Brown purchased from the United States Government.

At Miller Brothers' dry docks the steamship Tacoma was in for a new stern post, rudder, and shoe, the steambarge Berrien to have her shaft straightened, the tug Flossie Thielcke for some new plank and fender strake, the tug Mike Shields for a new wheel, the steamship William Edwards for repairs to her shoe and to have her rudder enlarged. The schooner S Anderson got a new bowsprit, jibboom and knight heads and some new stanchions and rail forward, the tug Uncle Sam got her wheel fastened at the derrick.

At the Chicago dry docks the steambarge Swallow was in for a new wheel, the schooner J. Kilderhouse for repairs to damages sustained by getting on the submerged portion of the government breakwater last week, one of Fitzsimmon & Connel's scows was in for calking and repairs, the tug Myriel for a new bow and stem, the schooner C. A. King got a new stern, the barge York State two new anchor stocks, the schooner Peoria new windlass bits, the steambarge City of New York new rudder casing and calking, the schooner Mediator a new jibboom, the schooner Glad Tidings a new sprit sail yard.

The steambarge J. H. Shrigley, Captain George Olson, has gone to Milwaukee to lay up.

A large number of vessels have gone into winter quarters at this port the past week, a number of which I enumerate: Schooners Thomas Hume, C. G. Mixer, Carrier, Clara, John M. Hutchinson, Perry, Gesine, Naiad. Delos de Wolf, H. H. Badger, Arctic, E. A. Nicholson, Michigan, Oak Leaf, A. E. Vickery, Evra Fuller, and the propellers Vanderbilt and Robert Hollands.

The schooner Evra Fuller, Captain John Christenson, which was laid up Monday, made twenty seven trips to Menominee and four across the lake from this port.

The tugs Muriel and W. H. Wolf collided Monday afternoon in the draw of Lake street bridge. The Muriel was on her way down the river and met the Wolf coming up. Through some mistake as to signals they met nearly stem on, the stem of the Wolf striking the Muriel about a foot from her stern on the starboard side, tearing away her iron plating and crashing into her down to below the water line. The Muriel brought her syphon into use and kept her from sinking until she arrived at the Chicago drydock. The Wolf got off with very little damage.

Captain Cochrane, of the steamer John A. Dix, who has been seriously ill at St. Joseph, is now recovering.

The Goodrich Line steamer Sheboygan has gone to Manitowoc to lay up. The propeller Depere will run to the east shore ports during the winter months.

WILLIAMS.

### SANDUSKY.

*Special to the Marine Record.*

J. B. Hart is building the engine for David Dussault's new boat being built here this winter. The boiler is being built in Buffalo. The engine will be 10x12 inches, double crank, 4 inches in diameter, with pony pump, to swing a 4 feet wheel. The boiler will be 4x8 feet, the three main flues will be, two 8 inches and one 10 inches in diameter, and 34 3-inch flues 6 feet long; the fire box will be 39x48 inches long and 30 inches high. The boiler will be steel with 60,000 pounds tensile strength, with steel dome 30x36 inches, and will be first-class in every respect.

### EAST TAWAS.

A part of the hull of the barge Joseph, lost two weeks ago, came ashore near Alabaster, midway between the Charities, and the cargo is strewn along the shore. About 50,000 feet of the cargo of lumber was saved.

### EAST SAGINAW.

*Special to the Marine Record.*

The propeller Porter Chamberlain, Captain Hi Robertson, with consort A. T. Bliss, Ida Corning, and Thomas H. Cahoon, arrived in the river Saturday from Buffalo. The Chamberlain and tow are coal laden for J. H. Beese & Co., of this city. The combined cargoes amount to nearly 3,000 tons. The Chamberlain, on discharging her coal, loads lumber for Cleveland, and will lay up at Detroit on her return to have her engine compounded, when it is expected she will do some great work next season.

The steam yacht Mary Bell that is ferrying for the street railway company on account of the condemning of the Genesse street bridge, on Saturday made 160 trips, carrying 2,892 passengers, which is the greatest number of passengers ever carried by any one boat on the Saginaw river in any three days.

The tug Tom Dowling, Captain Molles, arrived in the river this week from Lake Superior. She brought up the tug Frank Tracy, of Chicago, that is having her boiler rebuilt here.

The C. S. & C. Line tug Nat Stickney and barges Commodore and W. L. Peck arrived in the river Sunday from Duluth with 1,200,000 feet of lumber for C. M. Hill & Co., of this city. They report having had a nasty time of it, but got through all right.

The tug Willie Browne brought up the barges J. E. Sparrow and E. F. Gould, Sunday, and then commenced laying up for the winter, the Browne being the first tug to lay up.

With the end of this week the office of the deputy collector of customs will be removed from its present location to the new Quinnin block. The office has been with A. Ferguson, and later Ferguson & Son uninterruptedly for eighteen years. The late Alex Ferguson was appointed deputy collector of customs at this port June 18, 1867, and served in that capacity until 1881. When Charles W. Grant was appointed the office was still continued with Ferguson & Son, and captains reported arrivals and clearances there during Mr. Grant's tenure of office. Recently Mr. O'Donnell received his commission as deputy collector and the books and papers of the office still remained as before. With the close of navigation, however, Collector O'Donnell will remove them to his new office as stated.

A heavy northeaster, accompanied by a severe snow storm, struck here Monday about 7 o'clock. A number of small hookers were beached outside, but nothing further done that could be learned.

SHAW.

### CLAYTON.

*Special to the Marine Record.*

Schooners Andrews, Beales, and Benson have gone into winter quarters at Ogdensburg, and will hold their grain on board.

David J. Waldron, engineer of the steamer Magnolia, of Newport, R. I., left last week to join his steamer. They go to Philadelphia to fit out for a cruise to Florida and Mexico during the winter months.

About the first snow of the season commenced on Saturday afternoon, and continued during the night, up to Sunday, melting as fast as it comes.

The schooner Cornelia left on Saturday evening for Oswego with barley. B.

### HANCOCK.

A party of fishermen from here have returned from the north shore of Lake Superior after visiting the scene of the wreck of the steamer Algoma, where they picked up four floating bodies on the shore of Rock Harbor. The bodies were forwarded to Winnipeg for identification, if possible, and burial. The party said there was over 300 tons of freight from the steamer strewn over the shore. Portions of the pilot house cabin wheel, and a number of life preservers were picked up. It is the opinion of the party that a number of bodies have not yet been recovered from the shore, where nearly the whole wreckage has been lodged. The steamer can be plainly seen on the sandy bottom of Rock Harbor.

### KINGSTON.

"The schooner Philo Bennett is ashore at Wellington, and it is thought she will be a total wreck." The Philo Bennett, 115 tons was built at Port Rowan by Glover in 1869, hails from Toronto and is owned by Slackner & Coomber; classed B1.

IF there is one aid and protection to lake navigation more useless and dangerous than another it is the submerged portion of the Chicago breakwater on a stormy night.


TOLEDO HARBOR, OHIO.

U. S. ENGINEER, OFFICE,
CLEVELAND, OHIO, November 18, 1885,

FOR SALE AT PUBLIC AUCTION.

A sloop rigged scow, with sails, rigging, etc.; complete, now in use in Toledo harbor, Ohio. For particulars see posters, or inquire at U. S. Engineer office, No. 292 Prospect street, Cleveland, Ohio.

L. COOPER OVERMAN,
Major of Engineers.

## HISTORY OF LAKE NAVIGATION.

BY J. W. HALL.

*Written for the Marine Record:*

### CHAPTER XLV.

The loss on steamboats in 1850 was $265,700, on propellers $30,444, and on sail vessels $262,782, making a total loss of property of $558,926. Ten steamboats, including two tugs, twenty-one sail craft, and one propeller, the Petrel, passed out of existence. The loss on propellers was exceedingly light this year, but on sail vessels large, yet in proportion to the value and number of the craft, the aggregate loss was the largest and accidents most frequent among steamboats.

The loss of lives aggregated 431, 9 on the steamer Troy, 65 on the steamer Anthony Wayne, 38 on the steamer Commerce, 280 on the steamer G. P. Griffith, 11 on the steamer America, 1 on the steamer Canada, 1 on the Calumet, one on the scow H. M. Eddy, and 1 on a scow which capsized at the wreck of the Griffith.

There was nothing occurring on the lakes during the season of 1851 beyond the usual routine of events.

Navigation opened at Buffalo in 1851 April 2d, the steamer Canada the first to depart. The Straits of Mackinaw were clear April 3.

The first notable incident of the season was the explosion of the Canadian steamer Comet at Oswego with the loss of eight lives. She was afterward rebuilt and her name changed to Mayflower.

The following boats plied to the Sault St. Marie that season:

Steamer Northerner, Captain B. G. Sweet, Cleveland and the Sault.

Propeller Manhattan, Captain John Caldwell, Cleveland and the Sault.

Steamer London, Captain D. A. Nickles, Detroit and the Sault.

Propeller Peninsula, Captain H. J. Jones, Detroit and the Sault.

Propeller Monticello, Captain John Wilson, on Lake Superior.

Propeller Napoleon, Captain R. Ryder, on Lake Superior.

Propeller Independence, Captain J. Halloran, on Lake Superior.

Steamer John Hollister, Captain C. G. Keeler, Detroit and Toledo.

Steamer Lady Elgin, Captain G. Appleby, Buffalo and Chicago.

The appointments otherwise were the same as the season previous and given in a preceding chapter.

Forwarders not previously enumerated, as follows: Bissell & Armstrong, Detroit; James Watson, Lower Saginaw; Park & Co., Malden; S. McKnight, Sault ste. Marie; S. & A. Turner, Cleveland; W. F. Roelofson, Detroit; Kercheval & Collins, Detroit; Handy, Warner & Co., Cleveland; M. Douseman, Mackinaw; I. S. Hewitt, Cleveland; Hubby, Hughes & Co., Cleveland; Williams & Co., Sandusky; Henderson & Pettibone, Sandusky; O. P. Starkey, Cape Vincent; Hall & Reed, Sacketts Harbor; Murfee & Dutton, Racine; J. H. Crawford & Co., Milwaukee; Wright & Bancroft, Oswego; O. Callghan & McCarthy, Detroit; A. M. Hoyt & Co., East Saginaw.

There were 268 disasters during the season, with a loss on hull and cargo amounting to $730,537, and 79 lives. The following craft were lost:

Steamboats, Bunker Hill, burned at Tonawanda September 2; no cargo. Queen Victoria, wrecked at the head of Niagara river. Atlas, wrecked near Grand river, Canada. Wave, wrecked on Gull Island, Lake Erie.

Propellers, Henry Clay rolled over near Long Point, Lake Erie, with nineteen lives. Monticello, wrecked on Lake Superior, cargo copper. Vandalia (British), sunk by the schooner Fashion in Lake Erie.

Brigs, Chicago, capsized on Lake Erie; all lost, eight lives. S. B. Ruggles, merchandise; wrecked at Buffalo.

Schooners, Bennington, wrecked at the head of Lake Erie. Wabash, wrecked near Port Dover, Lake Erie. Atalanta, lost near same place. Wm. Brewster, wrecked near Buffalo. Palmyra, wrecked on Gull island, Lake Erie. Marion, lost, with all hands, on Lake Michigan; eight lives. Mackinaw, wheat, sunk by propeller Princeton in Lake Erie. Rose, (British), foundered in Georgian Bay. Chicago, (British), foundered in Lake Michigan. Joe Ward, corn, was wrecked at Buffalo. O. V. Brainard, burned on Lake Ontario. Henry Clay, foundered in Lake Erie. Alps, lost on Lake Erie. D. D. Bogart, wrecked near Erie. Kentucky, wheat, wrecked on Lake Ontario. Christiana, capsized on Lake Ontario; eleven lives. Abby, cargo coal, wrecked near Cleveland. Hannah Counter, wrecked on Lake Erie. Billow, lumber; lost on Long Point, Lake Erie. Saratoga, sunk by steamer Buckeye State in Lake Erie; four lives. Prince Albert (British), lost on Long Point, Lake Erie. Home, wrecked near Dunkirk. Texas, lost at Rond Eau, Lake Erie. Caledonia, wrecked on Lake Erie. W. G. Talcott, capsized and lost on Lake Michigan. Eudora, cargo brick, wrecked at Dunkirk. Scioto, wheat; sunk by brig Quebec in Lake Erie. California, wrecked near Barcelona, Lake Erie.

Scows, Flying Dutchman, wrecked on Long Point, Lake Erie. Anawan, capsized and lost on Lake Erie with five lives.

The following new tonnage was added to the lakes in 1851:

Steamer Lady Elgin, 1037 tons, built at Buffalo; route, Buffalo and Chicago.

Steamer Bay City, 479 tons, built at Trenton, route, Detroit and Sandusky.

Steamer Caspian, 1050 tons, built at Newport, route, Detroit and Cleveland.

Steamer Mazeppa, 250 tons, built on Lake Ontario, removed to Lake Erie.

Steamer Pearl, 251 tons, built at Newport, route, Detroit and Port Huron.

Steamer Ruby, 251 tons, built at Newport, route, Detroit and Port Huron.

Steamer Swan, 166 tons, built at Detroit, route, Detroit and Toledo.

Steamer Northerner, 514 tons, built at Cleveland, route, Cleveland and the Sault.

Steamer Buckeye State, 1274 tons, built at Cleveland, route, Buffalo and Detroit.

Steamer Plowboy, 450 tons, built at Chatham, route, Detroit and Chatham.

Steamer Arctic, 857 tons, built at Newport, plied between Detroit and Cleveland.

Steamer Queen, 64 tons, built at Dunville, plied on north shore of Lake Erie.

Steamer Morning, 154 tons, built at Holland Landing, plied on Lake Ontario.

Steamer Cleveland, 574 tons, built at Newport, plied between Detroit and Cleveland.

Steamer Minnesota, 749 tons, built at Maumee City, plied between Buffalo and Chicago.

Steamer Fox, 162 tons, built at Buffalo, plied on Lake Erie

Steamer New York, 1200 tons, built at Clayton, plied on Lake Ontario.

Steamer Brownsville, 400 tons, built at Brownsville, C. W., plied on Lake Ontario.

Steamer Highlander, 250 tons, built at Kingston, plied on Lake Ontario.

Propeller Buffalo, 689 tons, built at Buffalo, plied between Buffalo and Chicago.

Propeller Brantford, 404 tons, built at St. Catharines, plied on Lake Ontario.

Propeller Gore, 160 tons, built at Brockville, plied on Lake Ontario.

Propeller New Hampshire, 280 tons, built at Cleveland, renamed Granite State.

Propeller Protection 160 tons, built at Brockville, plied on Lake Ontario.

Propeller Peninsula, 550 tons, built at Detroit, plied between Detroit and the Sault.

The Northern Transportation Company was formed this year with a line of first-class propellers plying between Ogdensburgh and Chicago and intermediate points, Crawford & Chamberlain, proprietors. The company continued in existence for upwards of twenty-four years, during the latter part of which it was clearly demonstrated that owing to the fall in lake freights, in connection with so long and extended a route, the business did not pay, and gradually the steamers were disposed of and converted into steambarges, many of which are yet in service. They proved well adapted for heavy weather, and equally so with those of the larger class. During the latter years of the above corporation it was almost exclusively under the able management of Philo E. Chamberlain, who is yet among the living, but I believe retired from commercial pursuits.

## CAPT. J. W. BRETT.

Captain J. W. Brett, still in active business at Cleveland, as agent of Ward's Line, was appointed master of the new steamer Minnesota in 1851. Capt. Brett is one of the pioneers of lake navigation. He was born in Liverpool, Eng., October 1, 1816. He sailed one year from the fall of 1826 to the fall of 1827, on the steamboat Town, of Liverpool, which plied between Liverpool and Waterford, Ireland. He went to school three years to learn navigation, and in November, 1830, was bound apprentice to the ship Lady Gordan, of Whitehaven. He made one voyage to Cape of Good Hope, Botina and Liverpool and back, two to Bombay, and one to Bombay and from there to Cape of Good Hope with teak wood, from Cape to Mauritus with horses and mules, from Mauritus to London with sugar, from there to Whitehaven. He then went into the coal trade to Dublin and left the ship in the winter of 1835 at Dublin and proceeding to Liverpool, shipped on brig Gipsy, of New Castle, in which he made two voyages to Bordeaux. He left her in Liverpool, shipped on the ship Nimrod in March, 1837, bound for Charleston, S. C. After reaching Charleston he left the ship and walked to Georgetown and shipped on a brig in the coasting trade. After returning left her in Charlestown, he shipped on the Grotus, of Salem, bound for Havre; leaving the Grotus he shipped on the Ganges, of Richmond, and bound for Richmond, Virginia, where he was paid off, and shipped on a schhooner bound from Norfolk to New Orleans with negroes. He left in New Orleans and sailed on the river during the winter of 1837-'38, and came to Cleveland in the spring of 1838, when his life on the lakes commenced and in the fall he went back on the river. He went from Peoria to Chicago in the spring of 1839 and sailed on brig Rocky Mountain and steamboat Constellation and wintered in Cleveland. He sailed on the Constellation in 1840, and again wintered in Cleveland. The next spring he went as second mate of the ship Milwaukee in 1841, and was mate of the brig R. Hunter in 1842 and 1843, became master of the brig Robt. Hunter in 1844 and 1845, brig Hoosier 1846, Lewis Cass 1847 and 1848, schooner Hope 1849, mate of the propeller Illinois 1850, master of the steamboat Minnesota 1851 and 1852, Hendrick Hudson part of the season of 1853, and was married to Emma Munson, sister to Rudolph Edwards' wife, December 19, 1842. In 1843 he bought seven and a half acres of the original Edwards farm, and sold it in 1846 and bought a farm in Newburg township on the Warrensville road. Part of 1853 he remained on the farm and 1854. In the fall of 1854 he was mate of the propeller Oriental, and in 1855 he was master of the Oriental. In 1856 he became master of the Cuyahoga and in the fall of the same year master of the propeller Racine, same owners. He remained master of her until the fall of 1861; in 1862 he was master of the propeller Empire State, same owners; also, 1863, when they sold out to the Western Transportation Company. In 1864 he was master of the Oneida and left her in August and staid on his farm. In 1865 he was master of the Dean Richmond; also, in 1866, when he took an interest in the propeller Colorado, which he sailed during the seasons of '67, '68, '69, '70, '71. In 1872 took an eighth interest in the propeller Java and quit sailing that fall and turned his attention to the coal business with Messrs. McDowell & Caul, succeeding F. G. McDowell & Co.

## NOVEL STERN-WHEEL PADDLE STEAMER.

The well known Clyde firm, Messrs. Lobnitz & Co., Renfrew, have just completed a steel stern-wheel paddle steamer which is out of the beaten track of that class of vessels, and is, consequently, worthy of some notice. The vessel in question is named the Antonio Lopez, and was constructed to the order of the Compania General de Tobacos de Filipinas for service on the Rio Grande de Cagayan. On account of the difficulties experienced in navigating among the windings and numerous shallows of the Rio Grande de Cagayan, the Antonio Lopez possesses many peculiarities in her design. She is short, very strongly built, and does her work on a draught of 2 feet 6 inches of fresh water. She has a cylindrical return tubular boiler of steel, with a working pressure of 90 pounds per square inch, placed at the fore end of the vessel, the engines being of the compound surface-condensing type, with an indicated power of 235 horses. There are two paddle wheels, so placed that they do not project beyond the beam of the vessel, an arrangement which admits of the adoption of a style of engine at once compact and economical, and within view of the engineer when he is standing on the starting platform. The accommodation for the crew is placed under the deck; while upon the deck is a range of houses built of teak, and containing dining saloon, private cabin, captain's room, engineer's room, and engine house, the whole being covered with a light shade deck, supported on iron stanchions.

The Antonio Lopez, beside being a passenger carrier, is also arranged as a tow boat, and she is intended to tow four lighters, each capable of carrying 50 tons dead weight on a draught of 2½ feet of fresh water. These lighters have also been built by Messrs. Lobnitz & Co., and are now on their way to the east, having been taken to pieces and sent by rail to Liverpool for shipment.

At the official trial of the Antonio Lopez, which took place on the Frith of Clyde, a speed of eleven knots an hour was attained, and the representatives of the owners expressed themselves thoroughly satisfied with the results obtained, all the guarantees of the builders being completely fulfilled.—*Shipping World.*

## ABOUT BOILER INSPECTORS.

The following letter from the Treasury Department will probably prove interesting to some of the applicants for positions in the steamboat inspection service:

"I am in receipt of your letter of the 23d inst., in which you wish to be informed whether a man who is a boiler maker by trade, but who is not an engineer by trade, can be appointed an inspector of boilers.

"In reply you are informed that the lawful qualifications of a boiler inspector, as provided in section 4415, Revised Statutes, are that the person selected shall be of good character and suitable qualifications and attainments to perform the services required of inspectors of boilers, *who, from his knowledge and experience of the duties of an engineer employed in navigating vessels by steam,* and also of the construction and use of boilers and machinery, and appurtenances therewith connected, is able to form a reliable opinion of the strength, form, workmanship, and suitableness of boilers and machinery to be employed without hazard to life. * * * * *

In view of the portion of the statute which has been underscored herein, the department is of the opinion that it is absolutely essential that a person must have been an engineer of steam vessels to qualify him for the position of inspector of boilers, and that a person who is simply a boiler maker, without experience as an engineer, is not eligible to the position of inspector of boilers."

## COLLAPSE OF FLUES.

We notice that latterly the collapse of flues in marine boilers vies in frequency with the breakdown of propeller shafts, and may be characterized as a dangerous nuisance. We shall be glad to hear from any of our readers under whose notice any such accidents occur, as to whether they may be caused by ordinary weakness of the material of the flue under the higher pressures of steam now carried in marine boilers, or whether the flues are subjected to special deterioration and consequent weakness by an accumulation on the heated surface of incrustation. In view of the importance of the object we cannot do better than point out to our readers the respective causes of danger under those two heads. First, then, with regard simply to the danger of collapse in a flue of large diameter; it is well known to engineers that the resistance of wrought iron to the compressive strain to which a flue is subjected is much less than its power of resistance to the tensional strain to which the shell is subjected. Here, then, is the first inherent weakness in flues with material of the same thickness as in the shells. Diameter is a great factor in either weakness or strength; that is to say, the larger the flue the greater is its tendency to collapse, and on the average we should consider that the diameter of flues in marine boilers are on the increase. Similarly, the greater the length of the flue unsupported, the greater its liability to collapse, and this can only be avoided by the introduction of flanges or supporting rings at different points in the length of the flue. Theoretically, a flue is, when perfectly cylindrical, in its best form to resist collapsing pressure, as the pressure is all then resolved as compression upon the material. Should, however, any deformation in the shape of the flue occur from the perfect cylinder, the tendency to collapse is very much increased in the direction of the flattened sides. Now, in all cases where flues do eventually collapse, it is probable that they show a previous deformation in the direction in which they are about to collapse, and the proper notice of this change of form would frequently suffice to warn the engineer in charge, who might by staying, prevent the ultimate collapse; or, at any rate, reduce the working pressure until the danger was removed. The examination of flues as to their maintenance of form should be regularly conducted from time to time by means of a suitable gauge-bar, which could be easily inserted at the end of a rod and tried in different directions to ascertain whether any deformation was setting in. This, however, in practice is seldom done, as engineers in charge of boilers are apt to overlook the immense increase of danger of collapse after a very slight deformation has commenced. In raising the question for our readers' attention, as to whether collapse may not be due, in the first place, to heavy incrustation on the heated surface, we would impress upon their attention that such incrustation tending to allow the temperature of the plates to be raised, very materially reduces their strength, and thus hastens change of form and ultimate collapse. It is quite possible that an engineer in his anxiety to avoid corrosion, knowingly permits incrustation to a certain amount to accumulate upon the inside faces of his boiler plates, and there is no doubt that a thin layer of such incrustation is a great protection against corrosion, but it is easy to overdo this with lamentable consequences to the strength of the flue plates. We shall be glad to have any practical data on these points that our readers can afford us.—*The Marine Engineer.*

## FLAXSEED IN THE CHICAGO MARKETS.

The receipts of flaxseed in Chicago during last month aggregated 1,875,000 bushels of fifty-six pounds each; and for the first three months of the current crop year they were nearly 1,600,000 bushels larger and the shipments more than 1,500,000 bushels in excess of, those for the corresponding period of last year. About 250,000 bushels have been exported already to Europe, and as much more has been ordered for export.

These enormous shipments of flaxseed are undoubtedly the direct result of the low prices of wheat last fall and winter. Consequently in the far northwest much flax has been grown this season instead of wheat, with the success shown by the above figures. And the flaxseed has brought such good prices that there is some danger flax raising will be overdone for another season. The most gratifying feature in this unusual movement of flaxseed is the fact that we are supplanting Indian flaxseed in the European market, when Indian wheat threatens to become our dangerous competitor in the same market. Within a few years past Calcutta flaxseed has even been shipped to our eastern markets. Thanks to the abundant crops and low freight rates, it can fairly be expected that this season the eastern states will largely be supplied with the home product instead of with the Indian seed. In consequence of the American competition Indian seed is reported as having materially declined in price in Europe in spite of the failure of the crop in Russia.—*American Grain Trade and Elevator.*

A Buffalo paper says: The splendid new iron propeller J. H. Devereux takes a load of coal to South Chicago, when she will return to Chicago for the winter. Providing no mishap overtakes her she has made a very creditable season. Though she did not come out of the hands of the builder at Cleveland so as to be ready to leave port until May 24, she has made nine round trips to the upper lakes already, three of them being to Lake Superior. Having carried a load every time she has wasted no time nor energy, and with no regular consort she has done about $2,000 worth of towing. During the time she has not done $20 worth of damage.